

Human Resource Management Systems: A Structured Review of Research Contributions and Open Questions

Alewell, Dorothea; Hansen, Nina Katrin

Veröffentlichungsversion / Published Version
Zeitschriftenartikel / journal article

Zur Verfügung gestellt in Kooperation mit / provided in cooperation with:
Rainer Hampp Verlag

Empfohlene Zitierung / Suggested Citation:

Alewell, D., & Hansen, N. K. (2012). Human Resource Management Systems: A Structured Review of Research Contributions and Open Questions. *Industrielle Beziehungen : Zeitschrift für Arbeit, Organisation und Management*, 19(2), 90-123. <https://nbn-resolving.org/urn:nbn:de:0168-ssoar-359554>

Nutzungsbedingungen:

Dieser Text wird unter einer Deposit-Lizenz (Keine Weiterverbreitung - keine Bearbeitung) zur Verfügung gestellt. Gewährt wird ein nicht exklusives, nicht übertragbares, persönliches und beschränktes Recht auf Nutzung dieses Dokuments. Dieses Dokument ist ausschließlich für den persönlichen, nicht-kommerziellen Gebrauch bestimmt. Auf sämtlichen Kopien dieses Dokuments müssen alle Urheberrechtshinweise und sonstigen Hinweise auf gesetzlichen Schutz beibehalten werden. Sie dürfen dieses Dokument nicht in irgendeiner Weise abändern, noch dürfen Sie dieses Dokument für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen.

Mit der Verwendung dieses Dokuments erkennen Sie die Nutzungsbedingungen an.

Terms of use:

This document is made available under Deposit Licence (No Redistribution - no modifications). We grant a non-exclusive, non-transferable, individual and limited right to using this document. This document is solely intended for your personal, non-commercial use. All of the copies of this documents must retain all copyright information and other information regarding legal protection. You are not allowed to alter this document in any way, to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public.

By using this particular document, you accept the above-stated conditions of use.

Dorothea Alewell, Nina Katrin Hansen*

Human Resource Management Systems – A Structured Review of Research Contributions and Open Questions**

Abstract – Against the backdrop of a long standing research tradition on the topic of HRM systems, several prominent lines of research have been developed that offer central contributions to different aspects, questions and levels of HRM systems. Due to the fact that the established conceptual and empirical approaches to HRM systems differ with respect to their levels of analysis, questions posed and methods used, the field is characterized by more or less heterogeneous contributions and no clear overall structure. However, two central perspectives in the field of HRM systems research can be identified: A content-oriented approach and a process-oriented approach. In order to connect these perspectives, we develop a set of criteria to analyze and compare systematically content-oriented research contributions in HRM systems research in terms of content-oriented as well as process-oriented aspects. On the one hand, we contribute a structured overview and systematic comparison of many different theoretical and conceptual approaches to HRM systems research, thus making it easier to access this dynamic field of research for scholars, practitioners and students. On the other hand, we derive implications for the better foundation and design of empirical studies, and thus we contribute to the fostering of empirical research about HRM systems.

Beschäftigungssysteme –

Ein strukturierter Überblick über Forschungsbeiträge und offene Fragen

Zusammenfassung – Vor dem Hintergrund einer langen Forschungstradition zum Thema „Betriebliche Beschäftigungssysteme“ bzw. „HRM systems“ haben sich zahlreiche Forschungsansätze entwickelt, die Erklärungsbeiträge zu verschiedenen Aspekten, Fragen und Ebenen von betrieblichen Beschäftigungssystemen leisten. Da sich die konzeptionellen Ansätze jedoch hinsichtlich der gestellten Forschungsfragen, der angewendeten Methoden sowie der Analyseebenen erheblich unterscheiden, weist das Forschungsfeld einen sehr heterogenen Charakter auf. Dabei können zwei zentrale Forschungsstränge identifiziert werden: Ein inhalts-orientierter und ein prozess-orientierter Ansatz. Der zentrale Beitrag dieses Artikels liegt in einem systematischen Überblick und Vergleich der verschiedenen theoretischen Ansätze zu HRM Systemen, der sowohl Forschern und Praktikern als auch Studenten den Zugang zu diesem dynamischen Forschungsgebiet erleichtern soll. Zu diesem Zweck werden auf Basis eines systematisch entwickelten Kriteriensets zentrale Ansätze sowohl anhand von inhalts- als auch von prozess-orientierten Aspekten analysiert und verglichen. Ferner werden zentrale Implikationen als Ausgangspunkt für eine bessere theoretische Fundierung und Gestaltung zukünftiger empirischer Studien zu HRM Systemen abgeleitet.

Key words: Human Resource Management Systems, process-oriented approach, content-oriented approach, review (JEL: J40, J21, J80, M51, M54)

* Prof. Dr. Dorothea Alewell, Dr. Nina Katrin Hansen, Universität Hamburg; WiSo-Fakultät, Fachbereich Betriebswirtschaft, Lehrstuhl für Personalwirtschaft, Von-Melle-Park 5,D – 20146 Hamburg. E-Mail: dorothea.alewell@wiso.uni-hamburg.de, NinaKatrin.Hansen@wiso.uni-hamburg.de.

** Artikel eingegangen: 26.7.2011
revidierte Fassung akzeptiert nach doppelt-blindem Begutachtungsverfahren: 23.12.2011.

1. Introduction

Research on HRM systems already has a longstanding tradition. The basic idea in HRM systems research is that bundles, groups or clusters of complementary HRM activities may have large effects on firms' economic performance and/or the achievement of HRM objectives, while changes in single HRM activities or the implementation of inconsistent HRM instruments, policies and practices have little or no positive effect, or even negative effects on these goals (Ichniowski/Shaw/Prennushi 1997; Ichniowski 1990; Bloom/Van Reenen 2010; Beckmann/Kuhn 2010). Two (or more) HRM activities are called complementary if the effect of one activity on a dependent variable depends on the level of the other activity (or activities) (Milgrom/Roberts 1990, 1995). Given complementarity, we expect synergies between the respective HRM activities, with the result that the whole effect of the HRM system is more than the sum of the effects of the single HR practices (e. g. Beckmann/Kuhn 2010; Guthrie et al. 2009; Subramony 2009; Lepak et.al. 2006).

Within the field of HRM systems, many different lines of research have developed. A comparatively new and thriving strand of empirical literature aims at measuring HRM systems as bundles of HRM activities and tries to discover the economic effects for firms, the effects on workers and/or for unions (for reviews see Godard 2004; Lepak et al. 2006; Delarue et al. 2008; Bloom/Van Reenen 2010). While many of these empirical studies claim to find a positive relationship between "innovative" HRM systems and economic variables (for example Black/Lynch 2001; Beckmann/Kuhn 2010; Bloom/Van Reenen 2010; Guthrie 2001; Guthrie et al. 2009; Guthrie/Messersmith 2010; Ichniowski et al. 1997), a closer look at the theoretical or conceptual basis of these studies reveals a huge variety in the HRM activities that are assumed to belong to the HRM system. In other words, the "contents" of the HRM systems analyzed are extremely diverse. For example, even within the group of empirical studies on the "high performance work system" (HPWS) approach, Godard (2004) finds very different combinations of employment and work organization practices analyzed leading to a more "work-intensification-oriented" and a more "involvement-oriented" variant of HPW-systems. Other authors (for example Beckmann/Kuhn 2010 and Wolf/Zwick 2008) empirically analyze the combination of financial incentives, employee participation and involvement instruments, while other aspects that are often scrutinized in research about HRM Systems, for example promotions, accumulation of specific human capital, long term employment or employment security, and wages that are bound to jobs rather than to individual performance are more or less neglected. Thus, the core concept of a HRM system as a bundle of specific complementary HRM activities that are expected to produce economic performance effects is rather underdetermined in this literature: There is much heterogeneity in the literature as to which specific bundles cause the effects found empirically and what the specific effect mechanisms and interaction between these practices are.

This is partly due to the developments in the theoretical or more conceptual lines of research. Here, many and diverse lines of research have been developed and authors have made contributions on different aspects, questions and levels of HRM systems. Nowadays, the field is characterized by approaches from different disciplines

such as sociology, economics and strategic human resource management, which differ with respect to levels of research, the questions posed and the methods used, so that the field is characterized by very heterogeneous contributions and no clear overall structure. Thus, a structured review and analysis of the heterogeneous conceptual approaches may help to clarify some of these issues and, thereby, foster a sound theoretical basis of future empirical research.

In this paper, we therefore develop a structured set of criteria for reviewing diverse theoretical HRM systems approaches and give a systematic comparison of the main research lines and contributions within the field of HRM systems. We concentrate on approaches that focus explicitly on firms' HRM systems and the related decisions of firms to design and implement these HRM systems, while other, partially related approaches – for example with a stronger focus on nationwide differences in the institutional framing or functioning of labor markets – are not analyzed and not integrated into our comparison (e.g. the varieties of capitalisms approach (Hall/Soskice 2001) or Marsden's approach to employment systems (Marsden 1999)). The same is true for related approaches that have their central focus on other dependent variables, for example the effects on employment stability or the construct of the "Normalarbeitsverhältnis", even if they use concepts very much related to HRM systems to analyze their research questions (e.g. Struck 2006; Knuth et al. 2002).

We contribute a structured overview and systematic comparison of many different theoretical or conceptual approaches to HRM systems research, thus making it easier to access this field of research for students, scholars and practitioners, on the one hand. On the other hand, we derive conclusions for a better foundation and design of empirical research, and thus we contribute to the fostering of empirical research about HRM systems.

After deriving a set of criteria for comparison in section 2, we compare the approaches in section 3 and conclude in section 4.

2. Strands of research about HRM systems – Deriving a set of criteria for comparison

2.1 Content-oriented research

Much of the rather early research on HRM systems had strong roots in labor market research and was based on economic and sociological approaches in labor market theory and labor market segmentation, which differentiated between different types of external and internal labor markets (e.g. Lutz/Sengenberger 1974; Biehler/Brandes/Buttler/Gerlach/Liepmann 1981; Brandes/Buttler 1988; Köhler/Preisendörfer 1989). In sociology, the dual focus was on employer strategies, on the one hand, and labor market flexibility and mobility, on the other hand (see for an overview Köhler/Krause 2010; Struck 2006). Starting initially from the basic differentiation between internal and external markets, this dichotomy was refined, on the one hand, by distinguishing two, qualitatively different types of external markets – the "good" or "primary" craft segment and the "bad" secondary market, and, on the other hand, by the classic differentiation by Atkinson (1984) into four segments, characterized by functional or numerical flexibility and by internal or external flexibility. However, no HRM system was assigned to the fourth field in this scheme ("secondary internal market" or inter-

nal numerical flexibility) for a long time. Newer approaches (e.g. Köhler/Krause 2010) fill this gap and differentiate between primary and secondary markets, on the one hand, and internal and external markets (or closed and open HRM systems), on the other hand.

Within economics, internal labor markets were interpreted as an efficient instrument to handle information deficit and asymmetries. For example, Alewell (1993) interpreted internal labor markets as institutional designs that help the employer to learn about the employees' ability and motivation while they move up the internal job and promotion ladder. Gibbons and Waldman (1998) aim at explaining the available empirical facts about wage dispersion and promotion within firms. They thus formalize the idea of internal labor markets in a micro economic model which focuses on promotion, symmetric or asymmetric learning about the employees' innate ability and wage increases. However, they neglect other HRM instruments and policies. Transaction cost economics as a very broad and general economic approach analyzes the design of contracts in a framework of underlying contractual problems such as uncertainty and complexity of the environment, bounded rationality of contract partners, specificity of resources and opportunistic behavior. Within transaction cost economics, the article that focuses most closely on employment contracts and internal labor markets as HRM systems is Williamson/Wachter/Harris (1975). Here, the authors analyze one of these types of labor markets, the internal labor market, interpret it as a HRM system and as a collective contract supplementing the individual labor contracts, and essentially argue that specific human capital and the needs of firms to develop, deploy and maintain this resource are the main drivers of implementing HRM systems of this type. Later transaction cost economics analyses and differentiates between four coordinative designs within internal labor markets, given different combinations between high or low measurability of output and high and low importance of specific human capital (see, e.g. Sesselmeier/Funk/Waas 2010).

Later research in business administration followed up and presented four different types of "employment subsystems" (Osterman 1987), the implementation and use of which was interpreted as being a conscious and strategic decision by employers, dependent on production technology, social technology, legal restrictions from labor law and supply of manpower on the relevant labor market. Osterman (1988), for example, differentiates between a "craft" and a "secondary" employment subsystem that are both embedded in the external labor market, and an "industrial" employment subsystem that is appropriate for "blue-collar" workers and a "salaried" employment subsystem that is appropriate for "white collar" workers while the latter subsystems are both embedded in the organization. Referring to Tsui and Wang (2002), the industrial and the salaried models have a high resemblance to Lawler's (1988) "job-involvement" and "high-involvement" approaches as well as to Walton's (1985) "control" and "commitment" HR strategies. In a similar vein, Hendry (1995, 2000, 2003) modified these ideas and defined seven different types of employment systems, which are partially closely related to Osterman's types of employment subsystems.

Within this line of research, the HRM strategies of employers were finally placed in the focus of research interests and thus spurred intensive debates between researchers in HRM and in strategic management. Here, many contributions with a

focus on HRM results were published, for example, research on high performance work systems (Huselid 1995), high commitment work systems (Wright/Kehoe 2008; Xiao/Björkman 2006) or about the seven “best practices” of most successful employers (Pfeffer 1998).

Many of these lines of research focus on the *content* of HRM systems, the specific kind of HR practices applied and bundled together and a resulting typology of different kinds of HRM systems that can be interpreted as opposed “ideal types” or “archetypes” on a theoretical continuum. The most prominent dichotomies are (for a detailed overview see Hansen 2010): A “market-based” versus an “internal” HRM system (Delery/Doty 1996; Kang/Snell 2009), a “job-focused” versus an “organization-focused” employee-organization relationship (Tsui/Pearce/Porter/Hite 1995; Tsui/Wang 2002), a “cost-reduction” versus a “commitment maximizing” strategy (Arthur 1992), a “control” versus a “commitment” HRM system (Arthur 1994), as well as an “internal labor market” and a “high-commitment” HRM system (Baron/Kreps 1999). Furthermore, Ouchi’s (1980) three ideal types of organizational control capture the whole range of typologies described above extending from a “market” form of control as external archetype to “bureaucracies” as a hybrid and “clans” (for the Japanese ideal type see Ouchi/Jaeger 1978) as internal extreme pole.

In content-oriented research, the focus is thus on the *number* of and different *types* of employment subsystems with their specific combinations or bundles of complementary practices and policies, which stem from different functional areas of HRM and have differing effects on HR goals. Thus, criteria to compare the approaches are:

- statements with regard to the number and type of different employment subsystems, including the aspect of ideal type versus real type employment subsystems,
- statements with regard to the *content* of the employment subsystems concerning areas of HRM, for example recruitment, wages, incentives and motivation, training, separation,
- statements with regard to the specific basic *HR problems* to be solved by the HRM system or the type of effects that are expected by implementing the system.

2.2 Process-, level and conceptually-oriented research on HRM systems

However, newer research often takes another angle and concentrates not on the content but more on the *conceptual* aspects or on the “*process*” and *level* of HRM systems. These approaches often discuss general characteristics of HRM systems or try to structure HRM systems referring to their components, the organizational levels they may be found on and their strength. They thus focus not on content but on general aspects of the construction of the HRM system, for example the level in the organization on which elements of the HRM systems are to be found, and what differentiates stronger from weaker HRM systems – whatever their specific content may be.

Thus, these newer research approaches take a very different angle in analyzing HRM systems. These two perspectives – the content and the process perspective – have only rarely been combined in HRM research (but see Arthur/Boyles 2007; Ostroff/Bowen 2000). However, as the content-oriented approaches seem to differ quite strongly with respect to the criteria that may be derived from process-oriented

research, it may be fruitful to review the content-oriented approaches explicitly through the lens of process or levels based research. In addition to clarifying the range and status of results and the corresponding white spots in content-oriented research, there are many aspects regarding empirical research which result from this perspective, especially concerning the number and kind of levels of data collection and empirical measurement of HRM systems in general.

Thus, in the following, we present a short summary of the relevant process-oriented approaches, and derive criteria for the explicit comparison and structured review of the content-oriented approaches.

Level of research and level of HRM systems: Micro-, meso- or macro

Wright and Boswell (2002) give an outline and structured review of HRM research. They classify research in micro and macro research, on the one hand, and single and multiple practice research, on the other hand. In the resulting four-field-classification HRM system research is classified as the macro-multiple-practice corner of research. The level of macro research is described as the whole organization; the level of micro research as the individual or the single team or work group within an organization. However, the authors argue that the micro-macro-interface is blurred, needs much more attention and has not yet been handled adequately (p. 262ff). Thus they pose the additional question whether there are (one or more) relevant meso-research-levels in between micro and macro. For HRM systems research, this perspective leads to the question whether HRM systems are conceptualized at the macro-level, thus following the idea that one organization has one HRM system, or whether they are conceptualized on the meso-level, thus following the idea that there will often be more than one HRM systems, which are applied for different segments of one organization. Included in this latter perspective is the question what the relevant segments are, for example departments, plants, groups of jobs, groups of employees, e.g. core versus peripheral employees – and how or by which criteria these are delineated. Thus, in reviewing and comparing HRM systems research approaches, two further criteria should be,

- whether the organizational level the approach focuses at is explicitly stated and which one it is, and
- whether the idea is that more than one different HRM systems may be in coexistence within one firm, and if so, how the relevant segments of jobs and employees are characterized.

Components of HRM systems

Many of the empirical studies on HRM systems measure HRM systems on the level of practices or instruments applied in an organization. However, this conceptualization of HRM systems as bundles of practices or instruments may fall short of fully capturing the systems aspect: Arthur and Boyles (2007) develop a five component system of HRM systems with principles, policies, programs, practices and climate as the five components structuring a HRM system. Thus, in contrast to the content-oriented literature, they focus on the question on which level(s) HRM systems can be conceptualized and measured empirically. With HR *principles*, they address stated values, beliefs and norms regarding what drives employee performance and how organizational

resources and rewards should be allocated. HR *policies* are characterized as organizational goals or objectives for managing human resources; the intended or considered HR strategy as opposed to actual or realized strategy, and the relative emphasis firms place on program choices in areas such as staffing, training, rewards, and job design. In contrast, HR *programs* are defined as the set of formal HR activities used in the organization. With HR *practices* they characterize the implementation and experience of an organization's HR programs by lower level managers and employees. Programs and practices will potentially resemble each other to a high degree if programs are fully implemented. Last but not least, HR *climate* denotes the shared employee perceptions and interpretations of the meaning of the HR principles, policies, programs and practices in their firm.

Thus, a first and important criterion resulting from this approach is

- on which level or with regard to which components HRM systems are described and whether an approach clearly states the components and component level on which the HRM system is located.

Behind this idea of the differing components of HRM systems lie two further, central and basic questions of HRM systems research: Firstly, with the components differing elements of *HRM systems effects*, their causes, effect mechanisms and relations to each other come into focus. For example, an HRM system that influences principles and policies, but does not change or address programs, practices and climate, may not influence motivation or commitment of employees, because it does not “reach” or encompass the individual level in an organization. Or, as a second example, an HRM system that addresses climate only, but does not influence principles, policies, programs and practices, may have only short-term effects because long term collective perceptions of employees are foiled by rivaling signals of other components. A further criterion to review content-oriented research is thus

- whether an approach includes statements or an analysis concerning effect mechanisms of HRM systems and related relationships between differing components.

A second, narrowly related question resulting from this component approach is how and how intensively the differing components are thought of as a “system” with complementary elements. Components may be conceptualized as more or less additive and independent elements of HRM, or they may be conceptualized as a system where components are complementary and closely coordinated, balanced or aligned with other components, such that all elements are necessary for the HRM system and its effects and form some functional logic together. Thus, a further criterion to review content-oriented research is

- whether an approach includes statements or ideas about the “system” aspect of HRM systems and the question of complementary, strongly interactive relations between the differing components of HRM systems.

Strength of employment subsystems

Ostroff/Bowen (2000) and Bowen/Ostroff (2004) pose the question of how HRM systems affect individual behavior and firm performance. In searching for answers, they focus on the *strength* of these systems. Using social cognitive theory and Kelley's

(1967) attribution theory, they conceptualize strength of an HRM system by three main elements (Bowen/Ostroff 2004):

- *Distinctiveness* (meaning that the event-effect relationship is highly observable, for example, that the HRM system and its effects are visible and understandable to employees)
- *Consistency* (meaning that the event-effect relationship presents itself the same across modalities and time, for example, for all the employees in the respective segment of the organization)
- *Consensus* (there is agreement among individuals' views of the event-effect relationship, for example, between members of the HRM department and line supervisors).

For the three main elements of the strength of an HRM system, the authors derive 9 meta-features which help to generate a strong situation:

Distinctiveness is influenced by *visibility* and *understandability* of the HRM system, as well as by *the legitimacy of authority* and (perceived) *relevance of HRM*. *Consistency* is strengthened by the *instrumentality of consequences of employee behavior for goals*, by the *validity of HRM practices for what they purport to do* and *consistent HRM messages referring to differing levels of hierarchy* which help to avoid double bind communication and give stability over time. *Consensus* is influenced by an *agreement among principal HRM decision makers* (for example line managers and HRM departments) and *perceived fairness in distributive, procedural and interactional respect*.

According to Ostroff and Bowen, an HRM System that is high in distinctiveness, consistency, and consensus will create a “strong situation” (Bowen/Ostroff 2004: 208). By this, the authors mean that the HRM system shapes the psychological climate in an organization in a way that individual perceptions and motivation are strongly aligned and oriented towards collective goals. On the contrary, a weak system will not be able to create strong effects, because individuals will not perceive and follow the same signals and guidelines for their work behavior. This idea is strongly related to the concept of psychological contracts in that “strong situations” result in clear and consistent sets of employee expectations regarding employers' goals and activities.

Thus, a number of partial questions are relevant for the strength of the HRM system (Ostroff/Bowen 2000):

- Visibility of the system: Are HR processes and outcomes shared with employees?
- Understandability and clarity of the system: Is the information easily understandable for employees?
- Acceptability: Do employees buy into the system?
- Consistency of administration: Are practices uniformly applied across employees and across time?
- Effectiveness of administration and validity: Do practices do as designed?
- Internal consistency: Is there a horizontal fit between practices and programs?
- Intensity: How much time and effort is devoted to implementing the practices?

Thus, the authors effectively pose the question what degree of strength is needed to constitute an effective HRM system that efficiently helps to reach the HRM goals the employers follow. Is, for example, an HRM system that is well planned and has intended high internal fit, but is not thoroughly implemented, nevertheless a strong system, or does it create only weak situations which do not strongly influence individual behavior and firm performance? Which degree of strength is needed for a system to be perceived as a “system” and not only as a more or less coincidental combination of single HRM measures, instruments or practices? Thus, a further criterion to review content-oriented research is

- whether an approach includes statements or ideas about the “strength of the system” or some of the variables denoting strength in the approach of Ostroff/Bowen (2000).

2.3 Aggregation:

Criteria for the comparison of employment systems approaches

Criteria to review and compare HRM systems research are thus:

- **NUMBER and TYPE:** statements with regard to the number and type of different employment subsystems, including the aspect of ideal type versus real type employment subsystems.
- **COEXISTENCE:** whether the idea is that more than one different HRM systems may coexist within one firm.
- **CONTENT:** statements with regard to the content of the specific firms’ employment subsystems concerning areas of HRM, for example, recruitment, wages, incentives and motivation, training, separation.
- **BASIC HR-PROBLEMS:** statements with regard to the specific basic HRM problems to be solved by the HRM system or the type of effects that are expected by implementing the system.
- **COMPONENTS:** Whether the components of the HRM system and the organizational level they are found on are clearly described.
- **LEVEL:** whether the organizational level (micro, meso or macro level) the approach focuses on is explicitly stated and which one it is.
- **EFFECT MECHANISMS:** whether an approach includes statements or analysis concerning effect mechanisms of HRM systems and related relationships between differing components.
- **SYSTEM ASPECT:** whether an approach includes statements or ideas about the “system” aspect of HRM systems and the question of complementary relations between the differing components of HRM systems.
- **STRENGTH:** whether an approach includes statements or ideas about the “strength of the system” or some of the variables denoting strength in the approach of Ostroff/Bowen (2000).

In the following, we compare the most important and most often cited conceptual content approaches to HRM systems – in order of the year of publication of the individual research paper.

3. Comparing and reviewing content-oriented HRM systems research

In the following, we use the criteria derived in section 2 to give a structured review of important HRM systems approaches. A short summary of results is also given in form of two tables.

3.1 Transaction cost economics (Williamson/Wachter/Harris 1975)

Transaction cost economics as a very broad and general approach analyzes the design of contracts in a framework of underlying contractual problems due to uncertainty and complexity of the environment, bounded rationality of contract partners, specificity of resources and opportunistic behavior. The paper within transaction cost economics that focuses most closely on employment contracts and HRM systems is Williamson/Wachter/Harris (1975). Here, the authors focused on one of these types of HRM systems, the so-called internal labor market. This HRM system is interpreted as a “collective contract” supplementing the individual labor contracts. These individual contracts are deficient in solving all the basic contractual problems under the conditions of uncertainty and complexity, opportunism and specific skills. The “collective” contract or HRM-System is viewed as complementing the “authority relations”, the transaction cost minimizing – and therefore “best” – type of individual labor contract. As only one type of system is considered explicitly, no coexistence of differing systems within one firm is analyzed. However, the potential coexistence of different types of individual contracts within one firm is assumed in the approach, and conditions under which certain types of individual contracts are efficient governance mechanisms are described. Thus, conditions under which no authority relation and thus no internal labor market as complement are to be expected may be derived. Central characteristics of the internal labor market are long-term employment perspectives for employees, ports-of-entry jobs which are connected by promotion ladders with jobs on higher hierarchical levels, wages bound to jobs, promotion (lay-offs) by (reverse) seniority and/or performance and a high importance of specific human capital. Thus, there is a mixture of instruments and policies which form the *components* of the HR system.

In this conceptualization, the basic *HR problems* to be solved by the system are the endowment with specific human capital and the minimization of transaction costs of individual contracts in situations with high needs for specific human capital. Concerning the level of the system, there are no clear statements to our knowledge, but one can assume that the whole organization with all employees is meant and thus we have a *macro-level* HR system. Another possible interpretation is that ILMs exist for segments of jobs and employees where firm-specific human capital is important, thus leaving us with a *meso-level* approach which is sort of underdetermined with regard to the question in which areas firm-specific human capital is important and whether the authors overestimate the importance of firm-specific human capital under conditions of uncertainty and complexity of the environment (see Alewell 1993 for an intensive

discussion of this question). Differing *components* of the HRM system are mentioned but the type of components is not explicitly stated: practices (e.g. internal promotions, wages tied to job requirements), policies (e.g. long term employment) and principles and climate (stressing seniority in promotions, orientation of interests, transaction atmosphere). *Effect mechanisms* analyzed are that firm-specific human capital increases the risk of opportunism by a fundamental transformation of the employment relation. The ILM as a remedy results in an “orientation of interests” of individual employees on the current employer, and thus mitigates individual opportunism, helps to keep up a high motivation to build up firm-specific human capital and curbs the number of wage negotiations of specifically qualified employees. However, the theoretical basis of these assumptions about individual behavior is weak, because processes of “orientation of interests” are not related back to any models of individual behavior. High importance of firm-specific human capital results – via the required incentives for more experienced workers to teach less experienced workers and the incentives for all workers to acquire specific human capital – in high importance of seniority and long-term employment. The relationship between seniority and performance as promotion criteria is not analyzed explicitly; the authors refer to both criteria interchangeably. The implicit statement is that all elements of the system are needed complementary and in interaction with each other to achieve results in curbing opportunism and minimizing resulting transaction costs; however, this is not explicitly proved. Although the approach focuses on transaction costs, the costs of HRM systems are not analyzed explicitly, for example, the potential overhead cost of long term employment or of the dominance of seniority over performance in assessing and promoting workers.

There are no explicit statements about the *strength* of the system. But the central idea in the approach is that the ILM is a simple system with a clear structure, implemented for all employees with firm-specific human capital to collectively complement incomplete individual contracts and to focus individual interests on the collective or employers’ perspective. Thus, the system is normatively conceptualized as an ideally strong system which has clear cut incentives and sends visible signals how to act within the individual employment relation. Implementation is not discussed explicitly.

3.2 Munich segmentation theory (Lutz 1987)

Lutz (1987) describes three differing labor market segments or Human Resource Systems. Following his basic aim to explain aspects of labor market structure, he analyzes HRM systems as systematically designed bundles of HRM practices in organizations (see Alewell 1993 for a more detailed discussion of the 1987 approach, Köhler/Krause 2010 with a discussion of some later modifications by Lutz himself and newer developments).

The three HRM systems are the internal labor market (which, if closed under specific circumstances, is also called enterprise specific labor market segmentation), and two external market segments, the craft segment and the secondary segment. Coexistence of the different systems within one firm is explicitly assumed as possible (Lutz 1987: 30ff.), and thus the *relevant level* of the approach is the meso-level. The *internal labor market* is a system with carefully crafted task-job allocation, ports of entry and promotion ladders, which result in a systematic build up of specific human capital

for employees transferring along these job ladders. Long-term employment and external recruitment only via the ports of entry are combined with these elements to form the ILM. *Craft systems* are intensely shaped by norms of external institutions regarding allocation, gratification, performance and personnel assignment. Employees and employer have a strong bond or orientation to the external market; and promotion, job security and human capital build up is realized by changing between employers or by using external institutions rather than by being promoted internally. *Tayloristic systems* are characterized by a tayloristic work organization, constant, employer driven fluctuation in the workforce and very simple and repetitive jobs which can be fulfilled by employees with very basic qualifications only. There is no employment security at all for the personnel.

In this approach, HRM systems are a direct expression of the firm's HR strategy, which is implemented to secure necessary endowment with personnel at reasonable cost. However, the *HR problem* that the approach focuses on most intensely is the efficient answer to skilling problems. Motivation and related incentive problems, which may influence HR cost and endowment with human capital, too, are much less important in this approach.

The organizational *level* of HRM systems is clearly and unambiguously determined as a meso-level, as each of the HR systems is relevant for groups of employees with certain qualifications – the ILM for employees with firm-specific human capital, the craft system for professional and craft type qualifications and the secondary or tayloristic system for more or less unqualified workers. If, and if so, how, these groups are defined and whether they may overlap remains an open question. *Components* of the systems are a mixture of specific instruments (wages based on tasks of the job; promotion by seniority, human capital build up on the job) and policies (long-term employment in ILM versus strong market orientation in tayloristic and craft systems).

Central effect mechanisms of the HR systems are discussed for the build up of specific human capital. While general qualifications of professional and craft workers are built up in external institutions, specific human capital is built up within the firms' work system and promotion ladders. By carefully crafting the type and sequence of jobs, an employee is assigned to, and the jobs of the supervisors he works with, the build up of specific human capital is crafted, too. Thus, the central effect mechanisms assumed in this approach for ILMs are learning on the job and from other employees and the binding of employees with specific human capital.

Statements about the *system aspect* are not completely clear in this approach. On the one hand, the systemic and interactive character of the elements of the HR systems becomes quite clear as HR is analyzed as a system and as a systematically designed expression of a firm's HR strategy. With regard to the closure of ILMs, it is discussed that firms will have to bear some disadvantages as, for example, a loss of flexibility regarding the variation of the elements of a closed system. Thus, in comparison to the transaction cost approach, some more elements of employers cost in implementing the HRM systems are integrated. On the other hand, the approach focuses on qualification problems, while other HR problems as, for example, motivation and incentive aspects, are not discussed intensively. Thus, in the view of the approach some of the HR measures (skilling, job descriptions, promotion ladders, ports of en-

try) are discussed as complementary and as systematically combined, but for others (e.g. incentives, wages), we cannot draw any clear conclusions about their systemic relevance.

Strength of the system, degree of implementation, visibility, clarity etc. are not explicitly discussed in this approach. However, the central mechanism of closure of ILMs is described via the increasing bilateral obligations between employer and employees. Thus, with increasing closure of ILMs a strong system should grow – highly visible for both parties, strong bilateral obligations with clear-cut promises. Additionally, the features of a craft or professional market are shaped by external norms of performance, of gratification, allocation and personnel assignment, thus resulting in a system that is as strong as the surrounding institutions. All in all, the strength of the system is assumed for certain situations, but conditions that foster the strength of the system or effects of weak systems are not discussed explicitly.

3.3 From control to commitment to high performance HRM systems (Walton 1985; Arthur 1992, 1994; Huselid 1995)

Referring to *Walton* (1985), since the middle of the 1970s, most companies in the U.S. have gone through a transitional stage in their work force management which results in the transformation of their HR strategy: “factory after factory, there is a revolution under way in the management of work” (p. 77). To illustrate this tendency Walton contrasts the *HR practices* in two different plants of a big U.S. company operating in the chemical industry. Walton traces these differences in plant performance back to the alternative adoption of two different strategies in managing the work force (*HR policies* in terms of components): A strategy “imposing control”, on the one hand, and a strategy “eliciting commitment”, on the other hand (p. 78).

The *control strategy* is implemented to “establish order, exercise control, and achieve efficiency in the application of the work force” (p. 78). It is based on specialization and the division of work into narrowly defined jobs with fixed working tasks. This corresponds to a deep hierarchy of jobs which is related to specific status symbols and goes hand in hand with top-down decision making. Labor is seen as a cost variable rather than a resource worth investing in. Employees do not have any employment security although this can be seen as the central goal of unionization attempts. The prevailing compensation practices follow the rule of “a fair day’s pay for a fair day’s work” (p. 78).

In contrast, since the early 1970s an increasing adoption of a *commitment strategy* can be observed by a number of large companies such as General Foods, General Motors or Proctor & Gamble. These companies have implemented flat hierarchies and have minimized status differences, increased control spans, introduced quality circles and a flexible job design with broader skill requirements and responsibilities that combines planning and implementation. Instead of realizing governance through formal rules systems, control and coordination are orientated towards shared goals that refer to high performance standards and a continuous improvement of processes within a learning organization. Accordingly, compensation practices are based on individual as well as on team performance measures and encompass profit and gain sharing as well as stock ownership programs. Finally, employees have a long-term

employment perspective that may be accomplished by training and retraining efforts of the particular employer.

Against the backdrop of Walton's general distinction between a control and a commitment HR strategy, Arthur (1994) explores a strategic HRM approach to analyze the impact of a control system ("cost reducers") and a commitment ("maximizer") system (Arthur, 1992 with reference to Lawler, 1986 and Walton, 1985) on organizational performance outcomes in US steel minimills. On the basis of a cluster analysis, Arthur tests the proposition that the two HRM systems have a significantly different impact on the level of employee turnover and manufacturing performance (measured as scrap rate and labor efficiency). Furthermore, Arthur considers the nature of the HR system as an important factor that influences the relationship between firm performance and the negative consequences of turnover such as the disruption of commitment and social structures and sunk costs for onboarding and training expenditures.

On the basis of a regression analysis, Arthur shows that the required labor hours per ton were significantly lower in the commitment HR system than in the control HR system. However, because the scrap rate in the overall regression model turned out to be non-significant, Arthur's first hypothesis that "*Plants with commitment human resource systems will have better manufacturing performance than plants with control human resource systems*" (Arthur, 1994: 673) could not be entirely confirmed. In contrast, the second hypothesis "*Turnover will be higher in control human resource systems than in commitment human resource systems*" (p. 674) was confirmed because the turnover in the control HR system was over twice as high as in the commitment system and the difference was statistically significant. Altogether, Arthur was able to confirm the theoretical proposition that his empirically developed taxonomy of HR systems can be "significantly associated with variations in steel minimills' performance" (p. 682).

Against the backdrop of these and other former studies on High-Commitment HRM systems Huselid (1995) focuses on the empirical investigation of the relationship between systems of High Performance Work (HPW) *practices* (that can be understood as bundles of "best" High-Commitment practices) and corporate financial performance measures, thus effectively concentrating on one side of the Walton-Arthur-HR-Systems dichotomy. The point of departure is the assumption that "HRM practices influence employee skills through the acquisition and development of a firm's human capital" (p. 637), and that if HRM practices do not secure an appropriate level of employee motivation and performance and a certain degree of freedom regarding the way a job is performed, the full effectiveness of a highly qualified work force will not be utilized. The outlined HPW practices include a comprehensive recruiting and selection of employees, an extensive training to improve the employee's knowledge and skills, an increased employee involvement and participation in job design as well as incentive compensation and performance management systems. This combination of "best practices" (Pfeffer 1994, 1998) is supposed to enhance employee motivation and retention, decrease shirking and influence nonperformers to exit.

In summary, Huselid's study strongly supports the assumption that the implementation of HPW practices will lead to a lower employee turnover and a higher level of productivity and firm performance. Both factors of HPW practices were positively

related to productivity and corporate financial performance. In contrast to the “employee skills and organizational structures”-factor that was significant and negatively related to turnover, the “employee motivation”-factor was not significant. Huselid explains this finding by the fact that the implementation of an incentive compensation system may force lower-than-average performing employees to leave the firm. In terms of productivity, both factors were positive and significant when entered individually. However, when entered mutually, only the second factor remained significant. Therefore, Huselid suggests the adoption of a system perspective as very important. As opposed to the convincing theoretical argument that a higher degree of internal and external fit of HRM practices will lead to a higher level of firm performance, Huselid concludes that his results “did not support the contention that either type of fit has any incremental value over the main effects associated with the use of High Performance Work Practices” (p. 665-666).

Following Huselid (1995), a large number of studies on HPWS has evolved, often showing a strong normative focus on best practice implications. This HPWS paradigm was heavily criticized by Godard (2004). Beside a detailed critique of many aspects of the empirical work and its interpretations by researchers, Godard fundamentally criticizes the approach for neglecting the underlying differences in employers’ and employees’ interest, which hampers the evolution of high levels of trust, commitment and identification in full blown HPWS systems. The main conceptual aspect here is that the HPWS paradigm does not integrate basic assumptions about the employment relation and individual motives of work behavior adequately. Additionally, the possibility that intermediate levels of HPW practices and thus a “weaker” HPWS system could be superior to a “stronger HPWS system” in terms of economic performance because it helps to reach the same level of employee performance but causes a lower level of cost is neglected by many researchers. However, later empirical studies (e.g. Beckmann/Kuhn 2010; Wolf/Zwick 2008) address this last issue by studying labor efficiency (instead of productivity) as dependent variable.

In comparing Walton’s (1985), Arthur’s (1992, 1994) and Huselid’s (1995) seminal studies in terms of central HR problems addressed, levels of analysis, effect mechanisms and strength of the HR system the following suggestions can be made: The implementation of a commitment HR strategy as described by Walton (1985) can be seen as organizational attempt to face existing *HR problems* such as high labor costs and high absenteeism rates and an unsatisfied and unmotivated work force. Against the backdrop of the observed changes in the U.S. company landscape, Walton develops a normative recommendation for the necessary implementation of the commitment system in all companies to reach higher levels of performance standards and realize tangible dividends. In contrast, Arthur (1994) only indirectly refers to the basic *HR problem* by discussing two opposed HR systems – control versus commitment – as “different approaches” (*HR policies*) “to shaping employee behaviors and attitudes at work” (p. 672). In terms of content-based criteria, the comprehensive implementation of HPW practices (Huselid 1995) to enhance employee skills and motivation can be interpreted as solution for the central *HR problems* of a firms’ endowment with motivation and skills.

Referring to the level of analysis, Walton (1985) analyzes the *meso-level* of the production plant. However, on a *macro-level* of analysis, the implementation of a commitment system is suggested to lead to a higher firm performance by enhancing individual's motivation and work satisfaction and reaching standards of excellence. Arthur's (1992, 1994) and Huselid's (1995) analyses strongly refer to the *macro-level* of HRM systems and their firm-level influence on organizational performance. In applying a strategic perspective, Arthur (1994) explicitly chooses a *macro-level* approach to HR systems in firms with one minimill respectively one HR system.

Walton's (1985) chain of reasoning encompasses central *effect mechanisms* of HR strategies: The implementation of a commitment system is suggested to lead to a higher firm performance by enhancing individual's motivation and work satisfaction and reaching standards of excellence. Additionally, Arthur (1994) suggests that the HR systems moderate the relationship between turnover and manufacturing performance by creating a specific organizational context (*climate*). Throughout the sample, the commitment-based minimills reached a higher level of productivity, lower employee turnover as well as superior scrap rates than the control-based ones. In particular, these results confirm Walton's observations (1985) in the context of technologically intensive manufacturing. Also the HPW practices are suggested to positively influence a firm's overall performance by reducing the level of turnover and increasing productivity and corporate financial performance.

In suggesting a wide variety of company-specific forms that result in a "larger shape" or an "overall pattern" (p. 77) of HR strategy in a specific plant, Walton (1985) explicitly refers to the *system aspect* of the described HRM practices in control and commitment systems. By clustering specific HR patterns into two categories of HR with reference to the concept of equifinality, Arthur (1994) directly addresses the *system aspect* of HRM practices. Also in Huselid's (1995) study, the *system aspect* is explicitly analyzed through the measurement of the influence of internal and external fit of HPW practices. However, the results of the empirical study do not prove the theoretical argument and hypothesis that a higher level of internal consistent HRM practices lead to a higher firm performance. On the contrary, the average level of implemented HPW practices is rather important in this connection, thus, pointing at the additive instead of complementary effect of these instruments.

By stating the underlying normative recommendation of the superior commitment system, the aspect of the *strength* of the HRM system is implicitly addressed by Walton (1985): After a firm has gone through a transitional stage and has fully implemented a commitment strategy the strength of a system is able to unfold its positive effects which lead to a higher level of plant performance in all categories. Turning to Arthur's (1992; 1994) studies, its explicit aim was to test the particular systems' *strength* in moderating the relationship between a minimills' turnover and manufacturing performance. However, in contrast to Ostroff and Bowen's (2000; also Bowen/Ostroff 2004) concept, this notion of strength refers to the strength of a specific effect mechanism of a HRM system. Finally, in the HPWS paradigm, the relative *strength* of a HPW system is interpreted as the implementation of more instruments that focus on high performance that can be associated with reaching a higher level of firm performance. Simultaneously, this reflects the general logic behind the HPWS concept.

3.4 Osterman's employment systems in internal labor markets (Osterman 1987)

Osterman (1987) describes four real type HRM systems which he found in firms he interviewed about their HRM system; the industrial subsystem, the salaried subsystem, the craft subsystem and the secondary subsystem. There are explicit statements that these systems may coexist within one firm and are typically applied to differing groups of employees. Thus *the level of the subsystems* is defined by broadly defined groups of employees and the approach is clearly rooted on *the meso-level*. The industrial subsystem is characterized by narrowly and explicitly defined jobs, which are organized within job ladders. Thus, functional flexibility of the employer with regard to jobs and tasks is low. Employees are transferred along these job ladders by seniority; wages depend on jobs. Layoffs are possible and organized by reversed seniority, thus there is some numerical flexibility for the employer. Training and development are dominantly internally organized. Blue collar workers form the dominant group within this type of HRM system. The salaried subsystem addresses mainly white collar workers. Broad, flexible job descriptions with a high functional flexibility are combined with strong employment security and performance-related wages and promotions for employees. Trainings are dominantly internally organized. Craft subsystems combine broad and flexible job descriptions with individually negotiated wages. There are no internal promotions and no job security. The externally trained craft workers improve their hierarchical status and wage by changing the employer. Secondary subsystems are characterized by very narrow, but not strictly defined jobs. There are no promotions and no job security for the employees, who have only very basic qualifications and no formal training, and wages are job-dependent and low. Thus, the *described components* of the subsystems are programs and practices (promotions, wage setting, trainings) and policies (employment security).

Basic HR problems the employer addresses with the subsystems are cost efficiency, flexibility of HR resources and predictability of relevant HR aspects (Osterman 1987: 54ff.). The relation of these goals of the employer with each other remains somewhat blurred, as flexibility and predictability could well be means to reach cost efficiency. The relevant *effect mechanisms* are not explicitly analyzed by Osterman, but he gives a number of examples how specific components of the subsystems relate to the employer's goals and basic HR problems, for example, he argues that firm internal promotion ladders and training may improve the predictability of relevant HR variables as labor supply and wages are better controllable by the employer as with external instruments. With respect to the *systems aspect*, Osterman is quite explicit, on the one hand. Firstly, he states that there are a number of restrictions (from the fields of production technology, social technology, labor supply and through the law) which influence the employers' choice of employment subsystems (Osterman 1987: 59ff). Secondly, he argues that instruments and practices may have, depending on the restrictions, conflicting impact on the three differing goals of the employer. Thus, an important aspect of designing subsystems is to balance practices and policies that have conflicting effects on employers' goals and the respective trade-offs between basic HR problems. Thus, with Osterman's approach there is no "optimal" subsystem in the sense of a first-best-system, but one or more "second best" subsystems with regard to

differing combinations of goals and restrictions. Firm-specific weighing of goals and firm-specific restrictions influence the partial efficiency of HR subsystems for the employer. As a result, there may be HR subsystems which have a conflicting impact on employers' goals, which will hamper the *strength* of the respective system as there may be conflicting messages sent by the system.

On the other hand, Osterman does not stress complementarities between single practices or instruments. In his approach, system effects are more related to balancing flexibility and security for employer and employees by a specific mixture of HRM practices and policies. With this, indirect cost effects are analyzed as a trade of between differing areas of flexibility and their relationship to workers' preferences for security. Additionally, direct cost elements for the employer are integrated in his approach. Cost efficiency is one of the employer's goals in implementing HRM systems. Compared to the three contributions discussed so far (for a detailed comparison of 3.1-3.4 see table 1), Osterman's contribution is far more balanced with regard to assumptions about skill requirements, types of HRM systems and employers cost, but, at the same time, it is much less explicitly designed.

Table 1:

Criteria	Approach/Theory			
	Transactions Cost Economics (Williamson/ Wachter/Harris 1975)	From Control to Commitment to High Performance HR Systems (Walton 1985; Arthur 1994; Huselid 1995)	Old Segmentation Theories (Lutz 1987)	Osterman's Employment Systems in Internal Labor Markets (1987)
Content Criteria				
1. Number and Type of HRM systems	One Type: 1. Internal labor market; only system on the collective level, complementing four types of contracts on individual level	Walton (1985): Three Types 1. Control versus 2. Commitment HR system 3. A transitional stage Arthur (1994): Two Types 1. Control versus 2. Commitment HR system Huselid (1995): One Type 1. HPWS	Three Types: 1. Internal labor market 2. Craft markets / professional HRM system 3. Secondary labor market/ "every men market" /ayloristic HRM system	Four Types: 1. Industrial sub-system 2. Salaried sub-system 3. Craft subsystem 4. Secondary sub-system
2. Coexistence of differing types of HRM systems within one organization	<ul style="list-style-type: none"> Only one type of HRM systems is analyzed; therefore no coexistence of differing systems possible 	<ul style="list-style-type: none"> Walton (1985): Yes, explicitly Arthur (1994): Yes, explicitly Huselid (1995): No 	<ul style="list-style-type: none"> Yes 	<ul style="list-style-type: none"> Yes
3. Central content based statements	<ul style="list-style-type: none"> Long-term employment perspectives for employees; ports-of-entry-jobs which are connected by promotion ladders with other jobs, wages bound to 	<ul style="list-style-type: none"> Walton (1985): normative recommendation of a change towards the commitment system; assumption that employees can be motivated by giving them greater responsibilities and higher degrees of freedom in accomplishing their job tasks; this is assumed with the potential to reach higher levels of tangible dividends 	HRM systems differ centrally by the <ul style="list-style-type: none"> expected duration of employment relations, dominant type and level of qualification of employees, its degree of specificity and its relation to exter- 	HRM systems differ centrally by the <ul style="list-style-type: none"> broadness of job description promotion and layoff rules employment guarantees wage modalities type of educa-

Criteria	Approach/Theory			
	Transactions Cost Economics (Williamson/Wachter/Harris 1975)	From Control to Commitment to High Performance HR Systems (Walton 1985; Arthur 1994; Huselid 1995)	Old Segmentation Theories (Lutz 1987)	Osterman's Employment Systems in Internal Labor Markets (1987)
	<ul style="list-style-type: none"> · jobs, · promotion (lay-offs) by (reverse) seniority and/or performance, · high importance of specific human capital 	<ul style="list-style-type: none"> · Arthur (1994): empirically derived a taxonomy of HR systems: control versus commitment; control HR system is associated with the implementation of formal rules and procedures and output-oriented compensation practices that secure a higher level of labor efficiency and lower direct labor costs; in contrast, the commitment HR system is associated with the constitution of relational psychological contracts, a higher involvement of skilled employees as well as group problem solving · Huselid, (1995): recommendation of one HMR system – the HPWS consisting of best HRM practices; assumption that a higher degree of implemented HPW practices will lead to a higher firm performance 	<ul style="list-style-type: none"> · nal institutions · practices of control and incentives set for employees · type and level of job requirements 	<ul style="list-style-type: none"> · tion · typical segment of employees
4. Basic HR problems addressed	<ul style="list-style-type: none"> · Endowment with specific human capital; · Minimizing transaction costs of individual contracts in situations with high specific human capital 	<ul style="list-style-type: none"> · Walton (1985): implementation of a commitment HR strategy to work force management to face existing HR problems such as high labor costs and high absenteeism rates and an unsatisfied and unmotivated work force · Arthur (1994): discussion of “two different approaches to shaping employee behaviors and attitudes at work” that create an organizational context and through this have a certain impact on the consequences of turnover and, therefore, lead to different levels of manufacturing performance · Huselid (1995): comprehensive implementation of HPW practices to enhance employee skills and motivation 	<ul style="list-style-type: none"> · Procurement of right type of human capital and corresponding type of HR flexibility; · Especially demanding tasks for specific human capital 	<ul style="list-style-type: none"> · Cost efficiency, flexibility of HR resources, predictability of relevant HR aspects
Process Criteria				
5. Components	<ul style="list-style-type: none"> · No explicit statement; practices, policies and climate are all mentioned 	<ul style="list-style-type: none"> · Walton (1985): no explicit statement; description of HR practices as central components; HR policies (e. g. the employment perspective) and principles are mentioned (implicitly) · Arthur (1994): no explicit statement; especially practices and policies are discussed; the organizational context could be related 	<ul style="list-style-type: none"> · No explicit statement; practices and policies are most often mentioned 	<ul style="list-style-type: none"> · No explicit statement, but practices and policies are most often mentioned

Criteria	Approach/Theory			
	Transactions Cost Economics (Williamson/ Wachter/Harris 1975)	From Control to Commitment to High Performance HR Systems (Walton 1985; Arthur 1994; Huselid 1995)	Old Segmentation Theories (Lutz 1987)	Osterman's Employment Systems in Internal Labor Markets (1987)
		<p>to the concept of climate</p> <ul style="list-style-type: none"> Huselid (1995): explicit focus on HR practices as central components of HPWS; HR policy consistency is considered to analyze "internal fit as moderation" 		
6. Level/ Domain	<p>Macro-level:</p> <ul style="list-style-type: none"> whole organization /all Employees (assumption: high importance of specific human capital for all jobs; or: assumption that ILM exist where specific human capital is important) 	<ul style="list-style-type: none"> Walton (1985): meso-level of the production plant; however, the recommendation of a commitment system is suggested on a macro-level of analysis Arthur (1994): macro-level (firm with one steel minimill) Huselid (1995): macro-level – one system for all 	<p>Meso-level:</p> <ol style="list-style-type: none"> 1. ILM: employees with specific human capital 2. Craft markets /professional HRMS: employees with professional and craft human capital 3. Secondary HRMS: employees with very low or no formal education 	<p>Meso-level:</p> <ol style="list-style-type: none"> 1. Industrial subsystem: blue collar workers 2. Salaried subsystem: white collar workers 3. Craft system: craftsmen <ul style="list-style-type: none"> Secondary subsystem: employees without any (formal) education
7. Effect mechanisms	<ul style="list-style-type: none"> Specific human capital increases risk of opportunism (fundamental transformation of employment relation); ILM results in "orientation of interests" of individual employees on current employer, thus mitigates individual opportunism and curbs number of wage negotiations 	<ul style="list-style-type: none"> Walton (1985): implementation of a commitment system is suggested to lead to a higher firm performance by enhancing individual's motivation and work satisfaction and reaching standards of excellence Arthur (1994): control versus commitment HR systems moderate the relationship between turnover and manufacturing performance by creating a specific organizational context; the commitment system is, thereby, associated with a higher level of manufacturing performance – greater productivity, lower employee turnover and superior scrap rates Huselid (1995): a higher degree of implemented HPW practices will lead to a higher firm performance by reducing the level of employee turnover and increasing the level of productivity 	<ul style="list-style-type: none"> Type of human capital and long term employment results in long term orientation of employees interests on employer or external market Closure of ILMs only results if supply of manpower is scarce 	<ul style="list-style-type: none"> No clear statement, but central idea is that employer designs the system systematically under consideration of restrictions, alternatives, goals etc. No statement to the effect mechanisms on individual behavior
8. Systems Aspect	<ul style="list-style-type: none"> Implicit statement: All elements are needed in interaction with each other to achieve results in curbing 	<ul style="list-style-type: none"> Walton (1985): suggestion of a wide variety of company-specific forms but identification of a "overall pattern" (p. 77) of the HR strategy Arthur (1994): identification of HR cluster patterns that match the 	<ul style="list-style-type: none"> More or less explicit statement: in closed ILMs all elements in combination with each other are needed to achieve results 	<ul style="list-style-type: none"> Unclear, whether all elements are needed in combination with each other

Criteria	Approach/Theory			
	Transactions Cost Economics (Williamson/Wachter/Harris 1975)	From Control to Commitment to High Performance HR Systems (Walton 1985; Arthur 1994; Huselid 1995)	Old Segmentation Theories (Lutz 1987)	Osterman's Employment Systems in Internal Labor Markets (1987)
	<ul style="list-style-type: none"> · opportunism; · however, this is not explicitly proved 	<ul style="list-style-type: none"> · description of control versus commitment systems; reference to the concept of equifinality · Huselid (1995): reflected in the analysis of internal and external fit of HPW practices 		
9. Strength	<ul style="list-style-type: none"> • No explicit statements about strength • Implicit idea in the approach: Simple system with clear structure, implemented for all employees to collectively complement the individual contracts • This should result in a very strong system which sends clear signals how to act within the individual employment relation · Implementation is not discussed 	<ul style="list-style-type: none"> · Walton (1985): implicitly addressed by the underlying normative recommendation of the commitment systems. After the firm has gone through a transitional stage and has fully implemented commitment strategy the strength of a system is able to unfold its positive effects which lead to a higher level of plant performance in all categories · Arthur (1994): test of the particular systems' strength in moderating the relationship between a minimills' turnover and manufacturing performance · Huselid (1995): higher level in implementing of HPW practices can be associated with the firm's potential to reach a higher level of firm performance 	<ul style="list-style-type: none"> • No explicit statements about strength; • Implicitly one can conclude that closed ILMs are strong systems which are fully implemented; and that many aspects of craft systems are only as strong as the framing institutions; · Strong references to organization costs associated with change of HRM systems and thus with cost of implementation and change/non-change 	<ul style="list-style-type: none"> · No clear explicit statement about strength

3.5 HR Architecture (Lepak/Snell 1999, 2002)

The starting point of Lepak and Snell (1999) is the micro-macro-level divide and the suggestion that “it may be inappropriate to simplify the nature of human capital investments and suggest that there exists a single optimal HR architecture for managing all employees” (Lepak/Snell 1999: 32). In fact, HR *practices* will vary between different groups of employees depending on the degree to which their human capital is important for the firm's competitive advantage. Against the backdrop of the existing literature, Lepak and Snell (2002: 518) state that the “empirical examination of HR systems at this employment group level of analysis remains limited”. Therefore, the purpose of their “study is to address these issues by focusing on HR systems used for employees in different employment modes”.

Lepak and Snell (1999, 2002) introduce the concept of the firm's “HR architecture” which is based on transaction cost theory, human capital theory and the resource-based view. The HR architecture consists of four distinct quadrants, each of which combines a certain employment mode with a specific employment relationship

and HR configuration as a function of the employees' human capital value (core versus peripheral) and uniqueness (firm-specific versus generic). The four identified employment modes – (1) internal development, (2) acquisition, (3) contracting, and (4) alliance – refer to the internalization or externalization of employment and human capital building (the make-or-buy decision regarding the human capital stock of an organization). The described employment modes embody a specific employment relationship: (1) organization focused, (2) symbiotic, (3) transactional, and (4) partnership. Furthermore, the different employment modes and relationships can be related to a specific HR configuration: (1) commitment, (2) market based, (3) compliance, and (4) collaborative. These HR configurations represent a combination of certain HR practices such as staffing, training, appraisal and rewards “that define the employment mode, maintain the employment relationship and support the strategic characteristics of human capital” (Lepak/Snell 1999: 32). Thus, it is the configurations that come closest to the HRM systems approach with the employment modes and relationships as *components* of these systems.

Four quadrants of human capital characteristics and employment modes are the result:

Table 2: Dimensions of the HR architecture

(own illustration with reference to Lepak & Snell 1999, 2002)

Quadrant	(1) Knowledge-Based Employment	(2) Job-Based Employment	(3) Contractual Work Arrangements	(4) Alliances/ Partnership
Strategic value of human capital	high	high	low	low
Uniqueness of human capital	high	low	low	high
Employment mode	internal development	acquisition	contracting	alliance
Employment relationship	organization focused	symbiotic	transactional	partnership
HR configuration	commitment	productivity- based	compliance	collaborative

In the first Quadrant (1) “Developing Human Capital” (Lepak/Snell 1999) or “Knowledge-Based Employment” (Lepak/Snell 2002), the employees' human capital is valuable and unique. Individuals who have this kind of human capital can be seen as knowledge workers, e. g. engineers in the high technology sector and core employees of the firm who have a high impact on the organizations competitive advantage. Due to an economic as well as a strategic rationale, firms are going to choose a knowledge-based employment mode that is oriented towards the skills and competencies of employees to develop the human capital internally. Correspondingly, the employment relationship is organization focused and relational. It is characterized by a long-turn and mutual commitment between employer and employee. To support the organization-focused employment relationship, a firm is likely to implement a commitment-based HR system (Lepak/Snell 1999 with reference to Arthur 1994) that is characterized by loosely defined jobs, staffing decisions that are based on the employee's potential, extensive training, developmental appraisal, skill- or team-based pay. Lepak and

Snell (1999) draw a parallel to high-performance work systems (Huselid 1995; Lawler et al. 1995) in this connection.

The human capital type in quadrant (2) “Job-Based Employment” has a high strategic value, however, it is not unique and available in the external labor market. Therefore, the firm is going to rely on a human capital acquisition for predetermined jobs to internalize employment. However, it is not going to develop the required human capital internally. The focus lies on job-based staffing rather than on development. The corresponding employment relationship is symbiotic in the sense that it is based on mutual benefits for employer and employee. The employees are more oriented towards their profession and career than to a specific firm. For these job-based employees, for example, loan officers in the banking industry, a productivity-based HR configuration that is focused on selective hiring and staffing to identify employees who are able to immediately perform a required job is appropriate. Such employees are offered a market-equivalent pay and a result-oriented component.

In quadrant (3) “Contract Work”, employees have human capital that is neither specific nor highly valuable to the firm. In this case, a firm is able to contract work through the short-term hiring or leasing of temporary workers for low-level jobs, e. g. administrative staff. The employment relationship will be transactional (Rousseau 1995) which is focused on the economic aspects of a short-term exchange with a limited level of personal involvement and organizational commitment. In the “Compliance” HR system, HR practices focus on the enforcement of explicit rules and procedures to secure the employees’ behavioral conformance with organizational goals and standards. Further characteristics are limited training activities, job-based performance appraisals and hourly wages that refer to the accomplishment of standardized tasks.

Quadrant 4 “Alliances/Partnerships” refers to human capital that is unique but has a limited potential to create strategic value for the firm and, therefore, is not considered to be developed internally, e. g. the knowledge of an attorney or of a scientist that performs basic research. The alliance-employment mode represents a hybrid between internalization and externalization: It is based on an occasional but long-term external partnership where customized services are provided to client firms to achieve a mutual goal in form of a co-specialized asset. Examples are partnerships between an organization and a research laboratory, legal or management consultants or accounting firms. The employment relationship is based on partnership to build up trust and a mutual investment of both parties. However, both partners will attempt to protect their specific investments and knowledge. In the related collaborative HR system, HR practices such as training, e. g. job rotation or mentoring programs, are focused on the overall relationship rather than on the individuals human capital development. They have to support cooperative behavior, trust and team building as well as information sharing and knowledge integration. Additionally, evaluations will be developmental and performance appraisals and rewards team-based.

In conclusion, this conceptual framework focuses on the effective management of human capital allocation and development as the basic *HR problem*. In terms of transaction costs and strategic considerations, the aim is to outline criteria for a firm’s efficient and strategically appropriate investment in human capital on the basis of the internalization versus the externalization of employment. The approach can be located

on a *meso-level*, where subgroups of employees with different human capital characteristics define the boundary between the four HR subsystems. The central *effect mechanism* can be seen as the firm's mode of investing in human capital that is aligned with a certain human capital type and a function of strategic value and uniqueness. In their description of specific combinations of employment modes, employment relationships and HR configurations, Lepak and Snell (1999, 2002) directly address the *system aspect* for each quadrant, on the one hand, and for the overall HR architecture as combination of different subsystems, on the other hand. They highlight the importance of managing the whole architecture with all its quadrants in this regard. In terms of *strength*, a greater fit or congruence of the employment mode, the employment relationship and the HR configuration in a certain quadrant is associated with a higher level of efficiency and can be related to a greater strength of the subsystems and the overall HR architecture.

3.6 Employment systems (Hendry 1995, 2000, 2003)

Against the backdrop of the concept of psychological contracts, the resource based view and labor market theories, Hendry (1995, 2000, 2003) develops a conceptual approach with between five and eight employment systems.

From Hendry's perspective, the overall aim of the employer and the one relevant HR strategy is to "secure skills cost-effectively" (Hendry 2003: 1433), which means to secure the endowment with skills, on the hand, and the motivation of skilled employees, on the other hand, and both should be done cost-effectively. With this description, *the basic HR problems* to be solved by the employment system are stated: endowing the organization with the skills needed, securing motivation and controlling cost in doing so. Given this supposedly universal HRM strategy of securing skills cost-effectively, HRM systems are described by *generic elements or components in a system* of HRM, and these are: 1. points of entry into an HRM system, 2. nature of the jobs as low or high skilled and as narrowly specialized or involving a broad range of tasks, 3. number and type of career ladders within the system, 4. promotion rules and criteria, 5. training opportunities, 6. job security, 7. pay determination, 8. employee involvement.

Hendry proposes that the employers differentiate employment systems with regard to the level of the skills (high and low), on the one hand, and the form of control of the workers, on the other hand (personal control, organization control and market control). Thus, we have a classification with six different primary types of employment systems:

Table 3

Skill Level	Type of Control		
	Personal	Organization	Market
High Skill	Associate employment system	Career employment system	Occupational employment system
Low Skill	Family/political employment system	Industrial employment system	Market employment system

Besides these "traditional" systems, there are two systems, the "commitment HRM system" and the "performance management HRM system", which emerge from firms'

reactions to boundary tensions and developments in supply and demand on the labor market. Thus, all in all, we have *eight different* employment systems in this approach and these systems are clearly described on the *meso-level* of the firm, as Hendry (2003) sees these systems as addressing differing groups of employees within a firm. At the same time, the development of the classification by a matrix made up of skill differences and the form of control clearly hints at the systemic combination of these bundles of specific elements.

Due to space limitations, we cannot describe all of Hendry's employment systems. Therefore, we will only use one example to illustrate his *statements about central content of the employment systems*: "Career employment systems" for highly skilled employees with organizational control resemble the traditional internal labor markets very closely. There are only a few ports of entry, promotions go along well-defined career ladders and most movements up the career ladder are linked to seniority. Employees enjoy high job security and develop firm-specific skills via on-the-job-training. Fixed salaries dominate compensation; there are no extrinsic rewards or incentives to further stimulate performance. The labor force is managed through bureaucratic rules and procedures, which ensure fairness, loyalty of the staff and low labor turnover with minimal recruiting cost. There is a high trust environment established with the assumption that the workforce is reliable and effective; the need for direct supervision is supposed to be low. Hendry uses elements *from differing components* as, for example, climate (high trust environment), policies (job security) and practices and programs (on-the-job-training, employee involvement), although he himself describes the employment systems as bundles or set of specific practices (Hendry 2003: 1434). *Effect mechanisms* are all related to securing skills (availability and motivation of skilled employees) and securing cost-effectiveness in doing so. Concerning *strength*, Hendry (2003: 1438) does not make any explicit assumptions. However, he assumes that there are some internal factors that influence the design and implementation of employment systems as, for example, technology, management philosophy, size, stage of growth, ownership, traditions of trade unionism and business strategy as well as the existing system of employment; but, on the other hand, these internal factors reflect and respond to an external competitive environment and institutional influences that play a powerful part in shaping the employment system as, for example, the economic situation, sector competitive conditions, industry structure, stability of product markets and technological opportunities, sources of labor, influences on labor market participation, the role of trade unions and professional associations in controlling the supply of labor. Thus, if these external factors change, the employment system will partially change, too, sometimes to a degree that a new "emergent" employment system will come into being, thus reducing the strength of the "old" system and mixing it up with new elements. We may interpret this as an implicit hint at the impossibility of having strong systems in changing environments.

3.7 Neoinstitutionalistic theory of employment systems (Köhler/Krause 2010)

Building on the Munich approach (see above), Köhler and Krause (2010) analyze the material of about 100 intensive case studies about labor market segmentation and

employment systems in firms. Trying to structure the qualitative material, they differentiate between *four different real type HR subsystems*, which they describe by combining two dichotomies – internal and external systems, on the one hand, and primary and secondary systems, on the other. These systems differ centrally by the subset of jobs and employees they refer to, by the degree of closure against other internal or external HRM systems within or outside the firm, a dominant indicator of which are internal mobility patterns and the duration of employment, and by distinct rules and structural patterns of allocation, qualification and gratification within the systems. *Central statements with regard to the content of the systems* are as follows: Primary internal systems denote the typical internal labor market with low employment risks for employees and high duration of employment relations. Primary external systems denote the classical craft subsystem; they offer employment security through employability and on the basis of between-employer-mobility; wages and performance are defined in relation to the external labor market. Secondary external markets resemble the typical tayloristic secondary markets with low wages, low employment security, low qualifications and high risks for the employees. Secondary internal markets are not described in detail, but they will have comparatively low wages and long employment duration combined with low qualifications of the employees. These systems may *coexist* within one firm; Köhler and Krause (2010) argue that it is the norm rather than an exception that firms operate with more than one differing employment system, and that the old assumption of a close match of HR system and firm becomes increasingly problematic (p. 396 and 398). Examples from empirical research are given which show that these systems are positioned on a *meso-level in organizations*, comprising certain groups of employees which are characterized by specific tasks and qualification requirements.

The basic HR problems that the systems refer to are viewed from the perspective of the employer and the employee: While for the employer the endowment with HR resources i.e. their availability and their effectiveness, are the relevant problems, for the employee securing one's own subsistence via securing one's wage income is central. The central *effect mechanisms* described refer to the individual interest of the contract parties – employer and employee negotiating the employment relations with partially conflicting interests; the resulting patterns of allocation, gratification and qualification reflecting their respective influence and strategies, which result partially from their reference to the internal or external markets. The *systems aspect* is tackled by assuming the differing interests of the two contract parties, their market-based influence, strategies and the risk allocation between them together with the references to the external institutions and markets constitute the system. Thus, in this approach the system is not primarily defined on the level of complementary HR instruments or policies, but *an important component* of the system is the type of employment relation and its market reference. With this, the authors give their work an explicitly stated foundation in assumptions about the employment relation, which is related to the proposal of Godard (2004) for the HPWS.

Strength is not tackled explicitly in the approach, but the authors describe a number of changes in the systems, thus assuming that strong systems may be transformed or may erode to weaker systems under the pressure of external and internal forces.

They describe several aspects of change in the HRM systems, and thus, as Lutz (1987) did in his older approach, integrate a dynamic perspective into their analyses.

For a summarizing comparison of the approaches in chapter 3.5 – 3.7 see table 4.

Table 4:

Criteria	Approach/Theory		
	Employment Systems (Hendry 1995, 2000, 2003)	HR Architecture (Lepak/Snell 1999, 2002)	Neoinstitutionalistic Theory of Employment Systems (Köhler/Krause 2010)
Content Criteria			
1. Number and Type of HRM systems	Eight Types (six primary types and two emergent types): 1. Career 2. Industrial/clerical, 3. Occupational 4. Market, 5. Family/political 6. Associate 7. Commitment 8. Performance management	Four configurations of HR practices: 1. Commitment 2. Productivity-based 3. Compliance 4. Collaborative	Four Types: 1. Primary internal system (ILM) 2. Primary external system (craft subsystem) 3. Secondary internal system 4. Secondary external system (secondary market/tayloristic market)
2. Coexistence of differing types of HRM systems within one organization?	· Yes, explicitly	· Yes, explicitly	· Yes, explicitly
3. Central content based statements	· Employment systems differ centrally by skill level (high/low) and by form of control (personal, organization, market); the combination of these two criteria forms the six primary employment systems · Elements of the systems are: ports of entry, nature of the job, career ladders, promotion rules, training opportunities, job security, way pay is determined, employee involvement	· Four employment modes, relationships, HR configurations	HRM systems differ centrally by · the subset of jobs and employee they refer to, · the degree of closure against other internal or external HRM systems, a dominant indicator of which is the duration of employment, · distinct rules and structural patterns of allocation, qualification and gratification
4. Basic HR problems addressed	· Securing skills (endowment with skills and ensuring motivation of skilled employees) cost-effectively	· Effective management of human capital allocation and development; · Effective management of investment in human capital/employment understood as internalizing and externalizing human capital building	· Motivation/ incentives; · Qualification/ endowment with human capital
Process Criteria			
5. Components	· Explicit statement of employment systems as set of specific practices; · In the description of the systems components of climate, policies, and practices	· Explicit: HR configurations as specific combination of HR practices · Implicit: the employment modes and relationships could be related to specific	· No explicit statement; practices, policies, principles and climate are all mentioned in combination with the psychological contract and its expectation structures

Criteria	Approach/Theory		
	Employment Systems (Hendry 1995, 2000, 2003)	HR Architecture (Lepak/Snell 1999, 2002)	Neoinstitutionalistic Theory of Employment Systems (Köhler/Krause 2010)
	are mentioned	HR policies and a certain climate but refer to different levels	
6. Level/ Domain	Meso-Level: <ul style="list-style-type: none"> Sub-Groups of employees with high or low skills and under differing forms of control (personal, market, organization) 	Meso-level: <ul style="list-style-type: none"> Subgroups of employees with different human capital characteristics 	Meso-level; examples for domains: <ul style="list-style-type: none"> Primary internal system (ILM): Research and development departments, customer service of banks, care jobs in hospitals Primary external system (craft subsystem): jobs in construction, software design, health industry Secondary internal system Secondary external system (secondary market/tayloristic market)
7. Effect mechanisms	<ul style="list-style-type: none"> No clear statement, but central idea is that employer secures skills cost-effectively 	<ul style="list-style-type: none"> Mode of investment in human capital is aligned with certain human capital types as a function of strategic value and uniqueness 	<ul style="list-style-type: none"> Approach is based on a negotiation or exchange based idea with strong individual focus HRM systems are used as long as they are advantageous for both parties; If not, employer and/or employee will resort to market alternatives with the corresponding repercussions of the market on HRM system Central effect mechanism is individual interest of each party
8. Systems Aspect	<ul style="list-style-type: none"> Explicit statement about systematic combinations of skill level and form of control 	<ul style="list-style-type: none"> Specific combinations of employment modes, employment relationships and HR configurations 	<ul style="list-style-type: none"> Explicit statement about systematic combinations of employment duration, manpower needs of the employer, internal or external orientation of interest etc. Strong systems aspect
9. Strength	<ul style="list-style-type: none"> No explicit statements, but implicit statements about the influence of external factors on the change in employment systems; Strong systems will erode under these constant changes from the outside 	<ul style="list-style-type: none"> HR configurations as "helping to define the employment mode, maintain the employment relationship and support the strategic characteristics of human capital" (p. 32) 	<ul style="list-style-type: none"> No explicit statements about strength Implicit statements about strength regarding the assumed more or less clear and congruent expectations of employers and employees

4. Conclusions and implications for further theoretical and empirical research

The comparison of the conceptual and empirical approaches to HRM Systems under criteria derived from content and process-oriented research very clearly shows some deficient aspects of the state of research in employment systems:

Types of HRM Systems

1. There is still a wide variety of proposed ideal or empirically found real type HRM-systems. Systems classifications range from two types up to eight types of differ-

ing employment systems, although most approaches aim at describing employers' real choices. There is no clear trend in the literature yet whether two opposed, sometimes ideal type HRM systems, are analyzed as reference points or as extreme poles on a continuum of HRM systems lying between these two poles, or whether we have more than two, often four or more differential HRM systems that are defined by the variation of two or more criteria (see also Lepak et al. 2006).

Organizational level of HRM systems

2. Related to this aspect is the strong diversity in the criteria used to differentiate the systems from each other and the strong diversity in the assumption about which groups of employees the HRM systems apply to within a firm and how these groups of employees are characterized. Thus, the organizational level on which HRM systems are located differs. However, most of the approaches define at least two HRM systems, thus rooting the HRM systems on the organizational meso-level. This has important implications for empirical HRM systems research – HRM systems may not be measured on the level of the firm as a whole, but they have to be measured with respect to certain segments – of jobs or employees, depending on the criteria the theoretical concepts imply. Studies that only measure which HRM practices are used on the plant or the firm level can only capture HRM systems for the special case that the relevant group of jobs or employees comprises the total firm or plant.
3. In most content approaches to HRM systems there is no clear reference to the components within the firm in which HRM systems will materialize or by which HRM systems have to be described. While from the descriptions of the HRM systems in most approaches one can implicitly conclude that aspects of climate, practices and policies are meant to form the components of the system, this is seldom explicitly formulated. On the other hand, some approaches even clearly exceed the five components model of Arthur and Boyles (2007) and refer to the employment contracts, employment modes, underlying interests of employer and employee and the employment relations reference to external market segments. Here again, there are many implications for empirical research – the simple operationalization of HRM systems by lists of practices does not fit with most theoretical approaches, which often rely on more than one different type of component of HRM systems.

Systemic aspects of HRM systems

4. Systems are groups of elements that have specific and complementary relationships with each other. Without clear reference to what these elements of the system are and what kind of complementarities exist, the systemic character of the HRM system cannot be described and analyzed explicitly in detail. Without clear reference to the components of the employment system the expected effect mechanisms cannot be described in detail, because if there is no clarity about the components forming the system and their relationship with each other, the elements of the HRM system that inter-act with other elements in the firm to pro-

duce the effect mechanisms cannot be defined clearly. Conceptual and empirical studies should take more care of this aspect.

Effects and effect mechanisms

5. There is no clear trend in the literature as to the effect mechanisms analyzed in HRM systems research. While some approaches, mainly stemming from strategic Human Resource Management, analyze the relationship between HRM systems and firm performance variables, others define effects on HRM outcomes as personnel flexibility or control over HR cost and still others make no explicit reference to expected outcomes. Very few authors clearly state performance effects on both levels, firm level and HRM level, and analyze the interaction effects between both levels of effects, too. A side effect of this deficit is that the motivation to implement an HRM system is not clear – if the expected effects differ, the incentive to use the HRM systems may differ. A deeper analysis of these effect mechanisms would further the current discussion about the micro-foundations of collectivistic concepts in strategic (Human) Resource Management (e. g. Felin/Foss 2005; Foss/Minbaeva 2009). Related to this aspect is another deficit which Godard (2004) has already stressed with regard to the HPWS paradigm – most of the theoretical concepts tend to neglect the cost of implementing HRM systems. However, the effects and effect mechanisms of HRM systems cannot be analyzed and cannot be measured empirically if the negative side of the effects and thus incentives to refrain from implementing HRM systems are neglected.
6. Only few approaches clearly state their assumptions about the basis and mechanisms of individual behavior, and there is a huge variety in the theoretical perspectives used: psychological contract theory, social exchange perspectives, rational, transaction cost minimizing and opportunistic behavior, employment relations and type of employment contract, or no explicit reference at all. A further investigation of these issues would also facilitate the analysis of micro-foundations of central concepts.

Strength of the HRM systems

7. The strength of the system and thus the strength of the situation in which employees perform are probably important for the intensity of the resulting effect mechanisms of the HRM system. Thus, a clear conception of strength of the system is a basis for all effect related research on HRM systems. Giving more credit to the underlying, partially different interests of employers and employees (Godard 2004), the idea of the psychological contract and the forming of expectations in the employment relation (Rosseau 1995), as well as to attribution theory (on this point, see Ostroff/Bowen 2004) might help to improve the theoretical foundation of the effects expected.

External and Internal Factors of Influence and Restrictions

8. The question of who decides about and influences the HRM systems, their design, implementation and development, and what the preconditions in terms of influence and power to implement such a HRM System are, are rarely discussed in the approaches. Many approaches treat the environment of the firm and its in-

fluence on the employment systems more or less as a black box, including the institutions of the labor market, although the solution of the basic HR problems to be solved by the employment system will very often be dependent on these external factors. Concerning internal factors, the question of whether a centralized HRM department in the organization has the power to implement a centralized and coordinated HRM system – and thus restrict freedom of decision of line managers or decentralized HRM departments – is not discussed in any of the studies. We expect however, that the existence and the strength of such a system will depend on the relative influence and power of these actors.

9. A special case of influencing factors is strategy. While some approaches analyze the external or internal fit between the firms or the HR strategy and the HRM system and the effect of these two types of fit on the effects of the system, other approaches completely neglect strategy aspects and do neither analyze aspects of HR strategy nor of business unit or firm strategy. The choice of HRM systems and their effects may, however, depend on these strategies and should thus be integrated into the conceptual approaches as well as into empirical studies.
10. There is a number of further “determinants” of the effects of HRM systems (Bloom/Van Reenen 2010: 36ff). For some of these external factors it is not clear whether they themselves represent simple determinants or practices or resources complementary to HRM. This is true, for example, for the firms’ endowment with information and communications technologies. The underlying question is whether the HRM systems perspective has to be augmented by a systems approach including other organizational resources and practices beside HRM because of relevant complementarities between both areas. However, most conceptual approaches to HRM are more or less silent concerning this question.

If progress in conceptual and empirical research about HRM systems is to be made, the aspects mentioned above should be more explicitly analyzed and integrated into research. Authors should especially consider the following points: First of all, for a better empirical foundation of the theoretical conceptualization of HRM systems a clear distinction between different levels of analysis (meso versus macro level) is essential. Additionally, the question to which employee groups HRM systems are applied has to be answered. This may presumably be a function of firm size (one HRM system in a small plant versus several HRM systems in a large corporation). In terms of a process perspective, the different components of HRM systems have to be taken into account and the question whether all components are fully implemented and whether the system can be seen as a “strong system” has to be analyzed. Furthermore, a clear definition of complementarities between the components of HRM systems is especially necessary to clearly specify and substantiate the assumptions about the anticipated positive and negative effects of HRM systems on the employed individuals as well as on collective measures such as HR outcomes and firm performance. Finally, a systematic analysis of internal (e. g. power relationships, firm strategy, complementarity of resources etc.) and external factors of influence (e. g. labor market structure, environmental dynamics etc.) can enhance research on HRM systems and can build a solid ground for future empirical studies in this vibrant field of research.

References

- Alewell, D. (1993): *Interne Arbeitsmärkte – eine informationsökonomische Analyse*. Hamburg. S+W Verlag.
- Arthur, J. B. (1992): The link between business strategy and industrial relations systems in American steel minimills. In: *Industrial and Labor Relations Review*, 45: 488-506.
- Arthur, J. B. (1994): Effects of human resource systems on manufacturing performance and turnover. In: *Academy of Management Journal*, 37: 670-687.
- Arthur, J. B./Boyles, T. (2007): Validating the human resource system structure: A levels-based strategic HRM approach. In: *Human Resource Management Review*, 17: 77-92.
- Atkinson, J. (1984): Flexibility, uncertainty and manpower management. IMS Report No.89, Institute of Manpower Studies, Brighton.
- Baron, J. N./Kreps, D. M. (1999): *Strategic human resources: Frameworks for general managers*. New York, NY [et al.].
- Beckmann, M./Kuhn, D. (2010): Complementarities between workplace organization and human resource management: Evidence from Swiss firm-level panel data. WWZ Discussion Paper 2010/3, D-125, Basel.
- Biehler, H./Brandes, W./Buttler, F./Gerlach, K./Liepmann, P. (1981): *Arbeitsmarktstrukturen und -prozesse: Zur Funktionsweise ausgewählter Arbeitsmärkte*. Tübingen.
- Black, S. E./Lynch, L. M. (2001): How to compete: The impact of workplace practices and information technology on productivity. In: *The Review of Economics and Statistics*, 83: 434-445.
- Bloom, N./Van Reenen J. (2010): Human resource management and productivity. Working Paper 16019, National Bureau of Economic Research, Cambridge.
- Bowen, D. E./Ostroff, C. (2004): Understanding HRM-FIRM performance linkages: The role of the “strength” of the HRM system. In: *Academy of Management Review*, 29: 203-221.
- Brandes, W./Buttler, F. (1988): Die Unvermeidbarkeit interner Arbeitsmärkte. In: Reyher, L./Kühl, J. (Hg.): *Resonanzen. Arbeitsmarkt und Beruf – Forschung und Politik*, Festschrift für D. Mertens, BeitrAB 111, Nürnberg: 94-113.
- Delery, J. E./Doty, D. H. (1996): Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions. In: *Academy of Management Journal*, 39: 802-835.
- Delarue, A./Van Hootegem, G./Procter, S./Burrige, M.(2008): Teamworking and organizational performance: A review of survey-based research. In: *International Journal of Management Reviews*, 10: 127-148.
- Felin, T./Foss, N. J. (2005): Strategic organization: A field in search of micro-foundations. In: *Strategic Organization*, 3: 441-455.
- Foss, N. J./Minbaeva, D. B. (2009): Governing knowledge: The strategic human resource management dimension. In: *Center for Strategic Management and Globalization Working Paper No. SMG WP 3/2009*, Frederiksberg.
- Gibbons, R./Waldman, M. (1998): A theory of wage and promotion dynamics in internal labor markets. Working Paper 6454, National Bureau of Economic Research, Cambridge.
- Godard, J. (2004): A critical assessment of the high-performance paradigm. In: *British Journal of Industrial Relations*, 42: 349-378.
- Guthrie, J. P. (2001): High-involvement work practices, turnover, and productivity: Evidence from New Zealand. In: *Academy of Management Journal*, 44: 180-190.
- Guthrie, J. P./Flood, P. C./Liu, W./MacCurtain, S. (2009): High performance work systems in Ireland: Human resource and organizational outcomes. In: *The International Journal of Human Resource Management*, 20: 112-125.
- Guthrie, J. P./Messersmith, J. G. (2010): High performance work systems in emergent organizations: implications for firm performance. In: *Human Resource Management*, 49: 241-264.
- Hall, P. A./Soskice, D. (2001): *Varieties of capitalism: The institutional foundations of comparative advantage*. Oxford.

- Hansen, N. K. (2010): Theoretical foundations of the nexus between strategic human resource management systems and organizational capabilities. Kumulative Dissertation am Fachbereich BWL der Universität Hamburg. Hamburg.
- Hendry, C. (1995): Human resource management: A strategic approach to employment. Oxford.
- Hendry, C. (2000): Employment systems for comparing HRM practices. In: *Revue de Gestion des Ressources Humaines*, 37: 38-56.
- Hendry, C. (2003): Applying employment systems theory to the analysis of national models of HRM. In: *The International Journal of Human Resource Management*, 14: 1430-1442.
- Huselid, M. A. (1995): The impact of human resource management practices on turnover, productivity, and corporate financial performance. In: *Academy of Management Journal*, 38: 635-672.
- Ichniowsky, C. (1990): Human resource management systems and the performance of U.S. manufacturing businesses. Working Paper No. 3449, National Bureau of Economic Research, Cambridge, September 1990.
- Ichniowsky, C./Shaw, K./Prennushi, G. (1997): The effects of human resource management practices on productivity: A study of steel finishing lines. In: *American Economic Review*, 87: 291-313.
- Kang, S.-C./Snell, S. A. (2009): Intellectual capital architectures and ambidextrous learning: A framework for human resource management. In: *Journal of Management Studies*, 46: 65-92.
- Kelley, H. H. (1967): Attribution theory in social psychology. In: Levine, D. (Hg.): *Nebraska symposium on motivation*. Lincoln: University of Nebraska Press: 192-240.
- Knuth, M./Erlinghagen, M./Kalina, T./Mühge, G. (2002): Nachhaltige Arbeitsgestaltung zwischen Prekarität und Beständigkeit der Beschäftigungsverhältnisse. In: Knuth, M./Brödner, P. (Hrsg.): *Nachhaltige Arbeitsgestaltung: Trendreports zur Entwicklung und Nutzung von Humanressourcen*. München u. a.: Hampp: 303-377.
- Köhler, C./Krause, A. (2010): Betriebliche Beschäftigungspolitik. In: Böhle, F./Voß, G./Wachtler, G. (Hg.): *Handbuch Arbeitssoziologie*. Wiesbaden: VS-Verlag: 387-412.
- Köhler, C./Preisendorfer, P. (1989): *Betrieblicher Arbeitsmarkt im Umbruch: Analysen zur Mobilität, Segmentation und Dynamik in einem Großbetrieb*. Frankfurt.
- Lawler, E. E. (1986): *High-involvement management*. San Francisco.
- Lawler, E. E. (1988): Choosing an involvement strategy. In: *Academy of Management Executive*, 2: 197-204.
- Lawler, E. E./Mohrmann, S. A./Ledford, G. E. (1995): *Creating High Performance organizations: Practices and results of employee involvement and total quality management in fortune 1000 companies*. San Francisco.
- Lepak, D. P./Snell, S. A. (1999): The human resource architecture: Toward a theory of human capital allocation and development. In: *Academy of Management Review*, 24: 31-48.
- Lepak, D. P./Snell, S. A. (2002): Examining the human resource architecture: The relationship among human capital, employment, and human resource configurations. In: *Journal of Management*, 28: 517-543.
- Lepak, D. P./Liao, H./Chung, Y./Harden, E. E. (2006): A conceptual review of human resource management systems in strategic human resource management research. In: *Research in Personnel and Human Resources Management*, 25: 217-271.
- Lutz, B./Sengenberger, W. (1974): *Arbeitsmarktstrukturen und öffentliche Arbeitsmarktpolitik: Eine kritische Analyse von Zielen und Instrumenten*. Göttingen.
- Lutz, B. (1987): *Arbeitsmarktstruktur und betriebliche Arbeitskräftestrategie. Eine theoretisch-historische Skizze zur Entstehung betriebszentrierter Arbeitsmarktsegmentation*. Frankfurt/München.
- Marsden, D. (1999): *A theory of employment systems. Micro-foundations of societal diversity*. Oxford, London.
- Milgrom, P./Roberts, J. (1990): The economics of modern manufacturing: Technology, strategy and organization. In: *American Economic Review*, 80: 511-28.
- Milgrom, P./Roberts, J. (1995): Continuous adjustment and fundamental change in business strategy an organization. In: Siebert, H. (Hg.): *Trends in business organization: Do participation and cooperation increase competitiveness?* Tübingen: 231-258.

- Ostroff, C./Bowen, D. E. (2000): Moving HR to a higher level: HR practices and organizational effectiveness. In: Klein, K. J./Koslowski, S. W. J. (Hg.): *Multilevel theory, research, and methods in organizations*. San Francisco: 211-266.
- Osterman, P. (1987): Choice of employment systems in internal labor markets. In: *Industrial Relations*, 26: 46-67.
- Osterman, P. (1988). *Employment futures: Reorganization, dislocation and public policy*. New York.
- Ouchi, W. G. (1980): Markets, bureaucracies, and clans. In: *Administrative Science Quarterly*, 25: 129-141.
- Ouchi, W. G./Jaeger, A. M. (1978): Type Z organization: Stability in the midst of mobility. In: *Academy of Management Review*, 3: 305-314.
- Pfeffer, J. (1994): *Competitive advantage through people: Unleashing the power of the work force*. Boston.
- Pfeffer, J. (1998): Seven practices of successful organizations. In: *California Management Review*, 40: 96-124.
- Rousseau, D. (1995): *Psychological contracts in organizations. Understanding written and unwritten agreements*. Thousand Oaks.
- Sesselmeier, W./Funk, L./Waas, B. (2010): *Arbeitsmarkttheorien. Eine ökonomisch-juristische Einführung*. 3. Auflage, Heidelberg.
- Struck, O. (2006): *Flexibilität und Sicherheit: empirische Befunde, theoretische Konzepte und institutionelle Gestaltung von Beschäftigungsstabilität*. Wiesbaden.
- Subramony, M. (2009): A meta-analytical investigation of the relationship between HRM bundles and firm performance. In: *Human Resource Management*, 48: 745-768.
- Tsui, A. S./Pearce, J. L./Porter, L. W./Hite, J. P. (1995): Choices of employee-organization relationship: Influence of external and internal organizational factors. In: Ferris, G. R. (Hg.): *Research in person-al and human resources management*. Greenwich, 13: 117-151.
- Tsui, A. S./Wang, D. (2002): Employment relationships from the employer's perspective: Current research and future directions. In: *International Review of Industrial and Organizational Psychology*, 17: 77-114.
- Walton, R. E. (1985): From control to commitment in the workplace. In: *Harvard Business Review*, 63: 77-84.
- Williamson, O. E./Wachter, M. L./Harris, J. E. (1975): Understanding the employment relation: The analysis of idiosyncratic exchange. In: *Bell Journal of Economics*, 6: 250-280.
- Wolf, E./Zwick, Th. (2008): Reassessing the productivity impact of employee involvement and financial incentives. In: *Schmalenbachs' Business Review*, 60: 160-181.
- Wright, P. M./Kehoe, R. R. (2008): Human resource practices and organizational commitment: A deeper examination. In: *Asia Pacific*, 46: 6-20.
- Wright, P. M./Boswell, W. R. (2002): Desegrating HRM: A review and synthesis of micro and macro human resource management research. In: *Journal of Management*, 28: 247-276.
- Xiao, Z./Björkman, I. (2006): High commitment work systems in Chinese organizations: A preliminary measure. In: *Management and Organization Review*, 2: 403-422.